



ServeRAID-BR10i SAS/SATA Controller and IBM 3Gb SAS HBA v2 - New family of RAID controllers for System x servers

Table of contents

1	At a glance	4	Product number
1	Overview	4	Technical information
3	Key prerequisites	7	Terms and conditions
3	Planned availability dates	8	Prices
3	Description	8	Announcement countries

At a glance

The ServeRAID-BR10i SAS/SATA Controller (44E8689) provides an ideal solution for all servers requiring solid performance with RAID 0, 1 and 1E capability. This RAID adapter provides investment protection by supporting SAS and SATA hard drive and tape drive configurations.

The IBM® 3Gb SAS HBA v2 (44E8700) provides an ideal solution for all servers and workstations needing ultra high-speed data transfer in disk connectivity for data backup and mission critical applications. This HBA provides support for SAS and SATA HDDs and tape drive configurations.

IBM Virtual Media Keys

The IBM Virtual Media Key options take the Integrated Management Module to the next level, by providing full remote control of your System x® servers allowing administrators to fully manage servers.

Overview

ServeRAID-BR10i SAS/SATA Controller (44E8689)

The ServeRAID-BR10i SAS/SATA Controller provides an ideal solution for all servers requiring solid performance with RAID 0, 1, and 1E capability. Intended for general-purpose enterprise customers, the solution is suited for supporting mission critical applications for servers where high levels of sustained read and write operations are required.

The low-profile MD2 form factor ServeRAID-BR10i SAS/SATA Controller is based on the LSI 1068E processor and enables high performance internal connectivity to SAS/SATA drives.

Features and functions:

- 3 Gbps per port
- RAID levels: 0, 1, and 1E
- uEFI support
- PCI-E gen 2 compatible
- PCI-E small form-factor design (MD-2)
- Two x4 mini-SAS internal SFF8087 connectors
- 8-lane 2.5 Gbps PCI-Express
- Supports all major operating systems including Open source drivers for Linux®

Supported systems are x3550 M2 and x3650 M2.

System Management and RAID configuration provided via MegaRAID Storage Manager.

The ServeRAID-BR10i SAS/SATA Controller includes a one-year, limited warranty¹.

IBM 3Gb SAS HBA v2 (44E8700)

The IBM 3Gb SAS HBA v2 provides an ideal solution for all servers and workstations requiring ultra high-speed data transfer in disk connectivity for data backup and mission critical applications. The low-cost, host bus adapter supports direct attach to internal SAS/SATA II HDDs and tape or external tape or storage controller. IBM 3Gb SAS HBA v2 compliments IBM SAS HBA (25R8060) with the addition of uEFI support and PCIe gen 2 compatibility.

The PCI small form-factor IBM 3Gb SAS HBA v2 is based on LSI 1068E SAS processor offering. It can handle medium-to-large capacity server storage applications by connecting an 8-lane PCI-Express adapter with one external x4 SFF-8088 connector and four x1 internal 7-pin connectors.

Specialized development on the IBM 3Gb SAS HBA v2 enables support for integrated RAID 0, 1, and 1E on System x3455 for an added overhead savings at lowest possible cost for high computing systems.

Features and functions:

- 3 Gbps per SAS port
- uEFI support
- PCI-E gen 2 compatible
- PCI-E small form-factor design (MD-2)
- Four x1 internal 7-pin connectors/one x4 external SFF8088
- 8-lane 2.5 Gbps PCI-Express
- Connects to both SAS and SATA HDDs
- Connects to internal and external tape drives
- Connects to external storage controllers
- Integrated RAID 0, 1, and 1E for specific systems
- Supports all major operating systems including Open source drivers for Linux

Supported tape attach for IBM System x3200, x3200 M2, x3250, x3250 M2, x3350, x3400, x3455, x3500, x3550, x3550 M2, x3650, x3650 M2, x3655, x3755, x3800, x3850, x3850 M2, and x3950 M2.

Supported HDD attach with Integrated RAID 0, 1, and 1E for IBM System x3455.

Supported external storage attach for IBM System Storagetm, 1726221X, and 172622X.

Supported tape drives are IBM Half High LTO Gen 3 SAS Tape Drive (43W8478), IBM DDS Gen 5 SATA Tape Drive (43W8480), and IBM Half High LTO Generation 4 SAS Tape Drive (44E8895).

System Management and RAID configuration provided via MegaRAID Storage Manager.

The IBM 3Gb SAS HBA v2 includes a one-year, limited warranty¹.

With rigorous testing by IBM through the ServerProven® program, you can maintain a high degree of confidence that your System x server storage subsystems are compatible and will function reliably.

IBM Virtual Media Keys (46C7526 and 46C7527)

The IBM Virtual Media Key options take the Integrated Management Module to the next level, by providing full remote control of your System x servers. The IBM Virtual Media Keys allow administrators to fully manage servers remotely regardless of server or operating system condition.

¹ For information on the IBM Statement of Limited Warranty,

contact your IBM representative or reseller. Copies are available upon request.

Note: IBM makes no representations or warranties regarding third party products or services, including those designated as ServerProven. The information in IBM Announcement Letters is subject to change without notice. Consult the *IBM Sales Manual*, your IBM marketing representative, or your reseller for the most current information regarding IBM products.

Key prerequisites

- ServeRAID-BR10i: A supported System x server with an available PCI Express expansion slot
- IBM 3Gb SAS HBA v2: A supported System x server with an available PCI expansion slot

Planned availability dates

April 10, 2009

- ServeRAID[™] BR10i SAS/SATA Controller (44E8689)
- IBM 3Gb SAS HBA v2 (44E8700)

April 30, 2009

- IBM Virtual Media Key (46C7526)
- IBM Virtual Media Key for Entry Systems (46C7527)

Description

ServeRAID-BR10i SAS/SATA Controller (44E8689)

The ServeRAID-BR10i SAS/SATA Controller provides an ideal solution for all servers requiring solid performance with RAID 0, 1, and 1E capability. Intended for general-purpose enterprise customers, the solution is suited for supporting mission critical applications for servers where high levels of sustained read and write operations are required. The low-profile MD2 form factor ServeRAID-BR10i SAS/SATA Controller is based on the LSI 1068E processor and enables high performance internal connectivity to SAS/SATA drives.

IBM 3Gb SAS HBA v2 (44E8700)

The IBM 3Gb SAS HBA v2 provides an ideal solution for all servers and workstations needing ultra high-speed data transfer in disk connectivity for data backup and mission critical applications. The low-cost, host bus adapter supports direct attach to internal SAS/SATA II HDDs and tape or external tape and storage controller. IBM 3Gb SAS HBA v2 compliments IBM SAS HBA (25R8060) with the addition of uEFI support and PCIe gen 2 compatibility. The PCI small form-factor IBM 3Gb SAS HBA v2 is based on LSI 1068E SAS processor offering. It can handle medium to large capacity server storage applications by connecting an 8-lane PCI-Express adapter with one external x4 SFF-8088 connector and four x1 internal 7-pin connectors.

These controllers are ideal for supporting server and workgroup applications where high levels of sustained read and write operations are required.

Features:

- Investment protection, ease-of-use, and compatibility

Compatibility

- Support for popular network operating systems
- ServerProven testing - Verifies servers, HDDs, and the controllers function properly

IBM Virtual Media Keys

The IBM Virtual Media Key options take the Integrated Management Module to the next level, by providing full remote control of your System x servers. The IBM Virtual Media Keys allow administrators to fully manage servers remotely regardless of server or operating system condition.

The Integrated Management Module, an affordable, next-generation, systems-management environment, makes everyday management tasks easier and more efficient. The Integrated Management Module simplifies remote management by providing around-the-clock remote access with complete out-of-band management allowing administrators to perform systems management functions whether the server is operational or not. Combined with IBM Systems Director, the Integrated Management Module provides an end-to-end, complete, in-band and out-of-band solution.

Additional information

All offers are subject to availability. IBM reserves the right to alter product offerings and specifications at any time without notice. IBM is not responsible for photographic or typographic errors.

IBM makes no representation or warranty regarding third-party products or services.

Product number

Description	Part number
ServerRAID-BR10i SAS/SATA Controller	44E8689
IBM 3Gb SAS HBA v2	44E8700
IBM Media Key	46C7526
IBM Media Key for Entry Systems	46C7527

Technical information

Performance specifications

ServerRAID-BR10i Controller

- 3 Gbps per port
- RAID levels: 0, 1, and 1E
- uEFI support
- PCI-E gen 2 compatible
- PCI-E small form-factor design (MD-2)
- Two x4 mini-SAS internal SFF8087 connectors
- 8-lane 2.5 Gbps PCI-Express
- Supports all major operating systems including Open source drivers for Linux

Supported systems are x3550 M2 and x3650 M2.

IBM 3Gb HBA SAS v2

- 3 Gbps per SAS port
- uEFI support
- PCI-E gen 2 compatible
- PCI-E small form-factor design (MD-2)

- Four x1 internal 7-pin connectors/one x4 external SFF8088
- 8-lane 2.5 Gbps PCI-Express
- Connects to both SAS and SATA HDDs
- Connects to internal and external tape drives
- Connects to external storage controllers
- Integrated RAID 0, 1, and 1E for specific systems
- Supports all major operating systems including Open source drivers for Linux

Physical specifications

ServerRAID-BR10i (without mounting bracket)

Approximate height: 69.04 mm (2.72 in)
 Approximate width: 167.82 mm (6.61 in)
 Approximate depth: 14.45 mm (.57 in)
 Approximate weight: 0.09kg (.2 lb)

IBM 3 Gb SAS HBA

Approximate height: 64.26 mm (2.53 in)
 Approximate width: 167.82 mm (6.61 in)
 Approximate depth: 14.45 mm (.57 in)
 Approximate weight: 0.09kg (.2 lb)

Operating environment

Temperature:

- 10° to 35° C (50° to 95° F) at 0 to 914 m (0 to 3000 ft)
- 10° to 32° C (50° to 90° F) at 914 m to 2,133 (3,000 to 7,000 ft)

Relative humidity: 8% to 80 % (non-condensing)

Agency approvals

- UI
- cUL
- TUV
- IEC950
- VDE

Energy Star compliance

Is this product Energy Star Compliant? No

Note: The Energy Star emblem does not represent EPA endorsement of any product or service.

Hardware requirements

The ServerRAID-BR10i Controller is supported on the following IBM platforms.

System name	x3550 M2	Model	A11
	x3650 M2		

System Management and RAID configuration provided via MegaRAID Storage Manager.

The IBM 3Gb SAS HBA v2 is supported on the following IBM platforms.

Supported tape attach for IBM System x3200, x3200 M2, x3250, x3250 M2, x3350, x3400, x3455, x3500, x3550, x3550 M2, x3650, x3650 M2, x3655, x3800, x3850, x3850 M2, and x3950 M2.

Supported HDD attach with Integrated RAID 0, 1, and 1E for IBM System x3455.

Supported external storage attach for IBM System Storage, 1726221X, and 172622X.

Supported tape drives are IBM Half High LTO Gen 3 SAS Tape Drive (43W8478), IBM DDS Gen 5 SATA Tape Drive (43W8480), and IBM Half High LTO Gen 4 SAS Tape Drive (44E8895).

The IBM Media Key (46C7526) is supported on following systems: System 7946 and 7947.

The IBM Media Key (46C7527) is supported on following systems: System 7321 and 7323.

Software requirements

Support for all major operating systems:

- Windows®
- Red Hat Linux
- VMWare
- SUSE Linux

Compatibility

For latest compatibility information, visit

<http://www.ibm.com/servers/eserver/serverproven/compat/us/>

Note: Some configurations may not be compatible.

Limitations

None

Planning information

Additional cable orders required:

ServerRAID-BR10i SAS/SATA Controller (44E8689): No
IBM 3Gb SAS HBA v2 (44E8700): Yes

Current - Supported devices via cables 39R6529 or 39R6531
172621X IBM System Storage DS3200
172622X IBM System Storage DS3200

Current - Supported external cables for attach to DS3200
39R6529 IBM 1m SAS Cable
39R6531 IBM 3m SAS Cable

Approximate installation time: 20 minutes

Packaging

One box

Shipment Group

- ServRAID-BR10i controller
- 2U bracket
- CD
- Safety flyer
- Quick Install

One box

Shipment Group

- IBM 3Gb SAS HBA
- 2U bracket
- CD
- Safety flyer
- Quick install

Shipment Group Media Keys

- Manual
- CD-ROM
- Safety flyer

Security, auditability, and control

Security and auditability features of this product are:

- These product uses the security and auditability features of the host hardware, software, and application software.

Terms and conditions

This product is available from IBM under the terms and conditions for purchase.

Features and options only

Field installable	Yes
Customer setup	Yes
warranty period*	1 yr.
Service type (CCE/CCR/CRU)	CRU**
Maintenance agreement	No
Optional upgrade	No
Licensed programs	No

Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the feature or option. All other terms and conditions are the same as those applicable to the IBM machine type in which the feature is installed.

* To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or call IBM.

** This optional feature is designed as Customer Replacement Unit (CRU)

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http://www-1.ibm.com/servers/support/machine_warranties/machine_code.html

IBM may release changes to the Machine Code. IBM plans to make the Machine Code changes available for download from the IBM System x technical support Web site

<http://www-304.ibm.com/systems/support/>

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Machine Code, you are responsible for downloading and installing these designated Machine Code changes as IBM specifies. If you would prefer, you may request

IBM to install downloadable Machine Code changes; however, you may be charged for that service.

Warranty and service

- The warranty period is: One year
- HelpWare®: Contact your IBM HelpWare number, your place of purchase, or your local IBM office.

Help and service information - Features and options

During the warranty period, you can obtain technical support using IBM's online services or by calling the IBM Support Center at 800-426-7378 to answer any questions regarding your new IBM option. Response time will vary depending on the number and nature of calls received. If you need warranty service, return or exchange is available. In addition, if your IBM option is installed in an IBM computer, you may be entitled to service at your location. For general questions related to the use of your options, fee-based support is available. Your technical support representative can help you determine the best alternative.

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Announcement countries

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